

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2 (cancelled).

Claim 3 (currently amended): ~~The pump assembly of claim 2,~~ A pump assembly useable for pumping two-phase fluids from a subterranean well, the pump assembly having a longitudinal axis and comprising:

a housing; and

a first stage, the first stage comprising:

an impeller assembly; and

a diffuser assembly, the diffuser assembly comprising:

a diffuser hub having a diffuser hub profile, wherein the diffuser hub profile is formed by the revolution of a first line segment that is inclined to the longitudinal axis of the pump assembly; and
a diffuser shroud having a diffuser shroud profile.

Claim 4 (currently amended): The pump assembly of claim ~~[[2]]~~ 3, wherein the diffuser shroud profile is formed by the revolution of a second line segment not parallel or co-linear to the first line segment that is inclined to the longitudinal axis of the pump assembly.

Claim 5 (cancelled).

Claim 6 (currently amended): ~~The pump assembly of claim 5,~~ A pump assembly useable for pumping two-phase fluids from a subterranean well, the pump assembly having a longitudinal axis and comprising:

a housing; and

a first stage, the first stage comprising:

an impeller assembly, the impeller assembly comprising:

an impeller hub having an impeller hub profile, wherein the impeller hub profile is formed by the revolution of a third line segment that is inclined to the longitudinal axis of the pump assembly; and

an impeller shroud line having an impeller shroud line profile; and

a diffuser assembly.

Claim 7 (currently amended): The pump assembly of claim ~~[[5]]~~ 6, wherein the ~~impeller-hub shroud line~~ profile is formed by the revolution of a fourth line segment that is inclined to the longitudinal axis of the pump assembly.

Claim 8 (currently amended): The pump assembly of claim ~~[[1]]~~ 6, wherein the impeller assembly further comprises a balance hole.

Claim 9 (currently amended): The pump assembly of claim ~~[[1]]~~ 6, wherein the diffuser assembly further comprises a thrust washer.

Claim 10 (currently amended): The pump assembly of claim [[1]] 6, wherein the pump assembly comprises a plurality of stages.

Claim 11 (original): The pump assembly of claim 10, wherein each of the plurality of stages includes an impeller and a diffuser that are cooperatively configured to produce a diagonal flow path.

Claim 12 (currently amended): The pump assembly of claim 11, wherein different diagonal flow ~~path~~ paths are produced by the plurality of stages.

Claims 13 (cancelled).

Claim 14 (currently amended): ~~The downhole submersible pumping system of claim 13, further comprising~~ A downhole submersible pumping system, comprising:

a motor;

production tubing;

a first pump assembly coupled to the motor and production tubing, wherein the first

pump assembly includes at least one stage that is configured to produce a

diagonal flow path; and

a second pump assembly coupled between the first pump assembly and the production tubing, wherein the second pump assembly is configured to produce radial flow profiles.

Claim 15 (cancelled).

Claim 16 (currently amended): ~~The downhole submersible pumping system of claim 15,~~ A downhole submersible pumping system, comprising:

a motor;

production tubing; and

a first pumping assembly coupled to the motor and production tubing, wherein the first pumping assembly further includes at least one stage that is configured to produce a diagonal flow path, a plurality of turbomachinery stages configured to produce a diagonal flow path, and at least one turbomachinery stage configured to produce a non-diagonal flow path.

Claim 17 (original): A pump assembly for handling two-phase flow, the pump assembly comprising:

a housing;

a shaft; and

means for producing diagonal flow paths as fluid moves through the pump assembly.